

CLAIMS

1. An organic EL device comprising a plurality of light emitting layers different in emission color and laminated between an anode and a cathode, wherein

an intermediate layer comprised of an organic material is provided at at least one location between said light emitting layers.

2. The organic EL device as set forth in claim 1, wherein

the HOMO-LUMO energy gap of said intermediate layer is greater than the HOMO-LUMO energy gap of at least one material constituting said light emitting layers disposed adjacent to said intermediate layer.

3. The organic EL device as set forth in claim 1, wherein

said intermediate layer has both a hole transporting property and an electron blocking property or has both an electron transporting property and a hole blocking property.

4. The organic EL device as set forth in claim 1, wherein

a red light emitting layer, a green light emitting layer, and a blue light emitting layer are laminated in this order between said anode and said cathode.

5. The organic EL device as set forth in claim 4, wherein

said red light emitting layer, said green light emitting layer, and said blue light emitting layer are laminated in this order from the anode side between said anode and said cathode; and

an intermediate layer having a hole transporting property and an electron blocking property is provided at least between said green light emitting layer and said blue light emitting layer.

6. The organic EL device as set forth in claim 5, wherein

the LUMO energy level of said intermediate layer having said hole transporting property is higher than the LUMO energy level of an electron transporting component in said green light emitting layer.

7. The organic EL device as set forth in claim 4, wherein

said red light emitting layer, said green light emitting layer, and said blue light emitting layer are laminated in this order from the anode side between said anode and said cathode, and an intermediate layer having both a hole transporting property and an electron blocking property is provided at least between said red light emitting layer and said green light emitting layer.

8. The organic EL device as set forth in claim 7, wherein

the LUMO energy level of said intermediate layer having said hole transporting property is higher than the LUMO energy level of an electron transporting component in said red light emitting layer.

9. A display comprising a color filter on the light take-out surface side of an organic EL device comprising a plurality of light emitting layers different in emission color and laminated between an anode and a cathode, wherein

said organic EL device comprises an intermediate layer at at least one location between said light emitting layers.

10. The display as set forth in claim 9, wherein said organic EL device comprises a red light emitting layer, a green light emitting layer, and a blue light emitting layer laminated in this order between said anode and said cathode.

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CLAIMS

1. (As amended) An organic EL device comprising a plurality of light emitting layers different in emission color and laminated between an anode and a cathode, wherein:

a red light emitting layer, a green light emitting layer, and a blue light emitting layer are laminated in this order between said anode and said cathode; and

an intermediate layer comprised of an organic material is provided at at least one location between said light emitting layers.

2. The organic EL device as set forth in claim 1, wherein

the HOMO-LUMO energy gap of said intermediate layer is greater than the HOMO-LUMO energy gap of at least one material constituting said light emitting layers disposed adjacent to said intermediate layer.

3. (As amended) The organic EL device as set forth in claim 1, wherein

said intermediate layer has both a hole transporting property and an electron blocking property or has both an electron transporting property and a hole blocking property.

4. (As amended) The organic EL device as set forth in claim 1, wherein:

said red light emitting layer, said green light emitting layer, and said blue light emitting layer are laminated in this order from the anode side between said anode and said cathode; and

an intermediate layer having both a hole transporting property and an electron blocking property is provided at least between said green light emitting layer and said blue light emitting layer.

5. (As amended) The organic EL device as set forth in claim 4, wherein

the LUMO energy level of said intermediate layer having an hole transporting property is higher than the LUMO energy level of an electron transporting component in said green light emitting layer.

6. (As amended) The organic EL device as set forth in claim 1, wherein

said red light emitting layer, said green light emitting layer, and said blue light emitting layer are laminated in this order from the anode side between said anode and said cathode, and an intermediate layer having both a hole transporting property and an electron

blocking property is provided at least between said red light emitting layer and said green light emitting layer.

7. (As amended) The organic EL device as set forth in claim 6, wherein

the LUMO energy level of said intermediate layer having an hole transporting property is higher than the LUMO energy level of an electron transporting component in said red light emitting layer.

8. (As amended) A display comprising a color filter on the light take-out surface side of an organic EL device comprising a plurality of light emitting layers different in emission color and laminated between an anode and a cathode, wherein

said organic EL device comprises a red light emitting layer, a green light emitting layer, and a blue light emitting layer laminated in this order between said anode and said cathode, and comprises an intermediate layer at at least one location between said light emitting layers.

9. (deleted)

10. (deleted)